STUDY OF THE UROLOGICAL COMPLICATIONS FOLLOWING SEX REASSIGNMENT SURGERY

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STUDY OF THE UROLOGICAL COMPLICATIONS FOLLOWING SEX REASSIGNMENT SURGERY

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THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY

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CERTIFICATE

This is to certify that this dissertation entitled " STUDY OF THE UROLOGICAL COMPLICATIONS FOLLOWING SEX REASSIGNMENT SURGERY" submitted by **Dr. B. AYSHA SHAHEEN** appearing for **M.Ch (Urology)** degree examination in August 2013 is a original bonafide record of work done by her under direct supervision and guidance in partial fulfillment of requirement of the Tamil Nadu Dr.M.G.R. Medical University, Chennai.

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This is to certify that this dissertation entitled **" STUDY OF UROLOGICAL COMPLICATIONS FOLLOWING SEX REASSIGNMENT SURGERY "** is a original bonafide record of work done by **Dr.B. AYSHA SHAHEEN,** Post Graduate in M.Ch (Urology) under my direct supervision and guidance in partial fulfillment of requirement of the Tamil Nadu Dr.M.G.R. Medical University, Chennai.

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DECLARATION BY THE CANDIDATE

I, **Dr. B.AYSHA SHAHEEN ,** solemnly declare that this dissertation titled **" STUDY OF UROLOGICAL COMPLICATIONS FOLLOWING SEX REASSIGNMENT SURGERY"** was done by me at the Kilpauk Medical College Hospital and Government Royapettah Hospital , Chennai under the guidance and supervision of **Prof. Dr. Prof. Dr.P.Vairavel, M.S.,M.Ch.,D.G.O,** and **Prof.Dr.C.Ilamparuthi, M.S.,M.ch.,DNB.,**

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AIM

To study the urological complications following sex reassignment surgery in patients who attended the urology OP at Kilpauk medical college hospital and Government Royapettah hospital from January2012 to December 2012

INTRODUCTION

SEX reassignment surgery is the GOLD standard in the management of gender dysphoria. As the issue of gender dysphoria is on the rise.,new management strategies need to be evolved in the way of multidisciplinary approach . Contrary to other countries India lacks a definite policy and legislation towards transsexuals. Lack of insurance coverage for SRS and paucity of specialized tertiary centres compel the gender dysphoric to seek medical assistance from persons who lack formal training and also resort to traditional methods with high morbidity seriously undermining their quality of life and hampering future reconstructive procedures.

The social stigma coupled with illiteracy and unemployment deter the transsexuals from a regular followup

The high rate of alcoholism &substance abuse lack of a decent job and low self esteem make them vulnerable to unsafe sexpractices and acquiring HIV and other STD

REVIEW OF LITERATURE

HISTORICAL ASPECTS

Indian mythology is replete with transgender personalities viz Ardhanarishwara King Ila,of Ramayana Arjuna, &Shikhandini.of mahabarata

Pharaoh Hatsepshut of Egypt &King Henry III of France were transsexuals

In 1945, Sir Harold Delf Gillies the Father of Modern Plastic Surgery with Ralph Millard did the UK's first male to female operation

Harry Benjamin founded the International Gender Dysphoria Association (HBIGDA) 1979 .He formulated the transsexual Standards of Care (SOC's)

HBIGDA is now called 'World Professional Association for Transgender Health' (WPATH).

transsexualism is now called'gender identity disorder'

transsexuals are allowed to compete in Athens Olympics in 2003

'sex' is decided by genitalia and gonads, 'gender' is the psychological recognition of self and incongruence between sex and gender is called gender dysphoria.

They feel ing of being trapped in the wrong body is called transsexual phenomenon. Bringing congruency between the sex and gender through surgery is called gender affirmation surgery (GAS).

Transsexuals undergoing female to male (FTM) transition are known as transmen and male to female (MTF) transition are known as transwomen

NEUROPHSYIOLOGICALBASIS OF TRANS SEXUALISM

In transsexuals, the of ratio sexually dimorphic nuclei present the central subdivision of Bed nucleus of Stria Terminalis (BSTc) Of hypothalamus is altered

transwome n have altered genes modifying the action of testosterone. reducing testosterone actionand masculinization of brain during foetal development .

PREREQUISITES FOR GENDER AFFIRMATION SURGERY[31,34]

A firm diagnosis for the transsexual condition

A sense of discomfort about one's sex.

A wish to be rid of one's genitalia and the desire to live life as a member of the opposite sex.

An absence of physical intersex or genetic abnormality.

Absence of a mental disorder such as schizophrenia.

Differential diagnosis be

1. Classic trans -sexual.
2. effeminate homosexuality
3. transvestitism
4. psychosis.
5 psycho -neurotic sociopathy.
6 schizoid personality

If diagnosis is confirmed ', they can undergo GAS

Requirement of referral letters from mental health professionals

Letter from one mental health professional for starting hormone therapy, and breast surgery.

Letters from two mental health professionals before Genital Surgery.

Trans-sex hormonal treatments are important

Eligibility criteria for hormone therapy

18 years or above.

knowledge of benefits and risks of hormones

real - life experience of 3 months prior to hormones

psychotherapy for a minimum of 3 month

POSTOPERATIVE ISSUES CONCERNING THE PATIENT

.

Change of Name and Sex in Identity Cards and Passport and other certificates

A Gender Certificate is issued by the gender team involved in the surgery

Feminizing Surgeries

1) *MTF genital reconstruction*

Vaginoplasty

Vaginoplasty includes transform of male external genitalia into female genitalia.

Goals

Creation of a aesthetic vulva

creation of a urethral opening

Creation of a sensate neovagina for penetrative intercourse.

INCLUDES:

orchiectomy,

creation of a vaginal cavity and neoclitoris,

labiaplasty,

penile dissection with partial penectomy.

Penile inversion technique is commonly used to create the neovagina. .

Orchiectomy without vaginoplasty

Its single procedure used to reduce the risks and side effects of feminizing hormones .

Penectomy without vaginoplasty

Some MTF patients seek penectomy without vaginoplasty (also known as "nullification") as a less invasive alternative when vaginal penetration is not desired by the patient

TRADITIONAL TECHNIQUE OF EMASCULINISATION

The eunuchs belong to two main groups: Aqua (who do not undergo penectomy and castration)

Nirvan (who undergo penectomy and castration).

Individual isolated for some days and intoxicated with opiumOn a auspicious day by the Guru, the boy is laid down on a hard surface and a cord is tied tightly around his testes

others hold him down as a sharp knife severs the penis and testicles in one swift movement.

A metal or wooden plug is inserted into the wound to stop full closure and leave an aperture for the passage of urine. Hot oil is poured over the area and herbs are placed on it to hasten the healing process.

The second method is to tie a thin strong nylon thread around the penis and scrotum

separately after the person is under the influence of alcohol. The thread is tightened at regular intervals and kept in place till the scrotum and penis slough off such barbaric methods leave dense scarring and makes future reconstruction very difficult the boy has been made to sit on a grinding stone and pushed down until he bleeds from the anus. The drops of blood are taken to signify the first menstruation and only then is the initiation complete

COMPLICATIONS OF MTF SURGERY

Complication	Signs and symptoms	Treatment
Urethral stricture or stenosis	dysuria, difficulty voiding, diminished urine stream, increased time and effort required for urination	if immediately following removal of Foley catheter, replace catheter for 2-3 more days until swelling around meatus subsides and patient can void spontaneously • late stenosis: if minor, dilation with a Foley catheter may suffice; if major, surgical revision may be necessary
Swelling/irregularities of urethral meatus	urine spraying (rather than steady stream)	usually resolves spontaneously within a few months after surgery, as swelling subsides surgical repair may be needed in severe cas

Other feminizing surgeries

1) *Augmentation mammaplasty*

2) *Voice pitch-elevating surgery*

2) *Facial feminizing surgery-*
reconstruction of forehead cheek nose jaw and lips

Revisional surgery

Revision of scars, implant size contour location

Revisions in vaginoplasty
Clitoral reconstruction
labioplasty
commisuroplasty

,vaginal deepening

revision urethroplast

Standards of care in transsexuals manual findings

Hormone-related tumors in transsexuals receiving treatment with cross-sex hormones

estrogen plus progestin hormone replacement therapy have an increased risk of

invasive breast carcinoma

.

pituitary microprolactinoma
Benign prostate hyperplasia
prostate cancer
squamous metaplasia of the verumontanum

orchidectomy before the age of 40 prevents the development of prostate cancer

and benign prostate hyperplasia

PSA is done when there is a late start of hormone treatment or those who have a family history of prostate cancer

small cell carcinoma of lung the colon the bladder rarely

20-fold increase in venous thrombosis

GENITAL COMPLICATIONOF GAS

stricture of vaginal introitus(15%)

lost of vaginal depth (8%)

vaginal stricture (12%).

Vaginal wall necrosis (3%)

clitoris necrosis 2%

vaginal prolapse.1% & clitoral pain 1%

Clitoral pain (1%)

Urological complications

Lower urinary tract symptoms

1 obstructive voiding disorder due to progressive meatal stenosis

2 urinary retention. mostly observed 3 to 4 months after the second surgery.4%

3 Dribbling (8%)

4 stress urinary incontinence Grades I-II.

5 urgency and urge incontinence

Urethral injury was found in(4%) requiring primary repair

Distal urethral necrosis in (1%)

Neomeatus bleeding occurred in (3%)requiring external haemostatic sutures of its walls.or catheterization with 22 Fr. Catheter.

Infective and inflammatory complications

neovagina is colonized by largely the same intestinal species as the vagina in the absence of lactobacilli (some two thirds of transsexual women (64.0

meatal stenosis urethral narrowing causing significant post void residue causes recurrent cystitis and ascending infection when the host immunity is compromised or when

the causative organism is highly virulent. The most common pathogens are E coli, Staphylococcus aureus, and Proteus species

Perinephric abscess

Perinephric abscess is a life-threatening situation

suppuration in the perinephric space between the renalcapsule and the surrounding fascia. Most perinephric abscesses result from ascendinginfection or dissemination from other sites of infection like the liver, gallbladder, pancreas, pleura

symptoms fever, flank pain, chills, nausea, vomiting, and dysuria Referred pain to the hip, thigh, and knee i[16]. Abdominal tenderness can also occur direct extensions into the flank or psoas muscles,

extends as a flank abscess [19]. percutaneous drainage under image guidance is the treatment of choice

if it fails or is contraindicated, open surgical drainage is performed

about 4 cases have been reported so far.

HIV and transsexuals

According to the Amsterdam health survey

44%had heterosexual orientation

22% homosexual preference

28% had a bisexual orientation and the

remainder of women 'not sexually interested'

socioeconomic and psychological factors contribute to the high prevalence of HIV-related risk behaviors.[13]

depression and poor self-esteem, contribute to low negotiation power in relationships with

primary partners and low self-efficacy to negotiate safe sex.[15]

MTF transgender persons engage in casual sex with multiple partners to affirm their female

gender identities and engage in substance use to cope with stress associated with sex work

and depression

unprotected receptive anal sex (URAS) depends on type of partner (primary, casual, or

commercial sex partners) URAS with primary partners was associated with drug use before sex;
URAS with casual partners was associated with HIV-positive status and drug use before sex;

and URAS with commercial sex partners was associated with African American ethnicity

and low income

65% of MTF transgender s who tested positive were aware of their HIV status and that

58% received antiretroviral therapy

commercial sex clients offer to pay extra for sex without condoms.

education programs that address the specific needs transgender-specific outreach

STUDY GROUP

All transgenders who attended the Urology OP at

1)Kilpauk medical college hospital and

2)Government Royapettah hospital between 2011 january -2012 December were included in the study

STUDY DESIGN

OBSERVATIONAL STUDY

MATERIALS:

Patient evaluation:history:place of surgery date of surgery and the qualificationof the primary surgeon are noted down. Historyof hypertensiondiabetis HIV STATUS recorded

General examination:fever pallor and lymphoadenopathy are notedabdomen palpated for bladder distension.

LOCAL EXAMINATION

Presence of scarringsinus tracts foreign bodies in tho silk suture materialsdribbling of urine& status of the meatus are recorded

Per rectal examination:sphinter tone and prostate size assessed.

INVESTIGATIONS

URINE ANALYSIS

URINE CULTURE AND SENSITIVITY

BLOOD UREA SUGAR CREATININE HIV status

HEMOGRAM

AUG if possible

UROFLOWMETRYif not in retention pre operatively and postoperatively

USG TO ASSESS THE UPPERTRACTS PRESENCE OF STONES AND PVR both pre and post operatively

CYSTOSCOPY was done during surgery to assessthe bladder& rarely prostatepatients presenting with acute retention SPC was done.

PEROPERATIVE except dilatation all other procedures were done under spinal anaesthesia

Presence of dense scarring and fistulae subsequent to foreign bodies by way of suture materials warranted liberal excision scar tissue and a perineal urethrostomy

A meatal &sub meatal narrowing alone called for a Blandy s flap meatoplasty

Post operative period

Catheter removed either on 7th or 10 days as dictated by the natureof surgery meatoplasty catheter was retained for a week and 10days at the end 14 daysPVR was assessed by USG and Uroflowmetry was done

Results tabulated and statistical analysis done.

RESULTS AND OBSERVATION

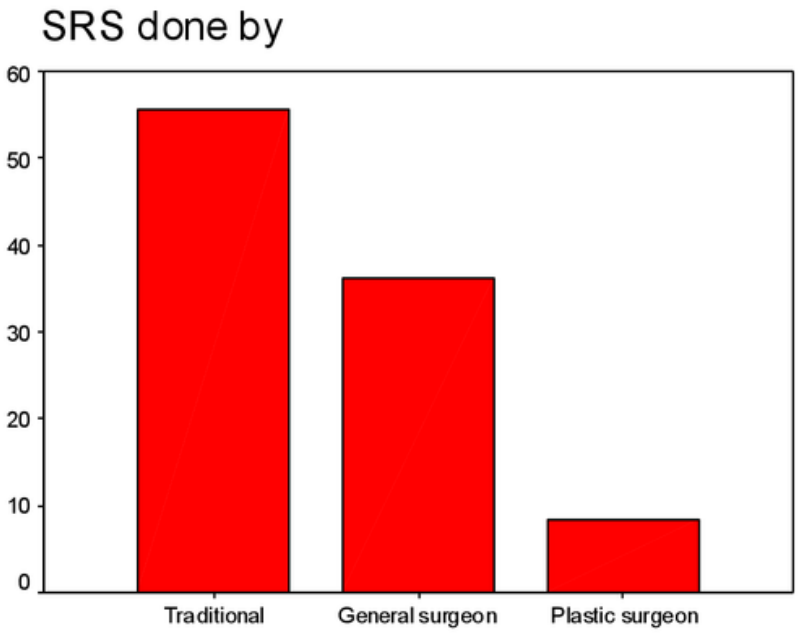
AGE

	N	Minimum	Maximum	Mean	Std. Deviation
Age in years	36	19	50	27.08	6.313
Valid N (listwise)	36				

SRS done by

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Traditional	20	55.6	55.6	55.6
	General surgeon	13	36.1	36.1	91.7
	Plastic	3	8.3	8.3	100.0

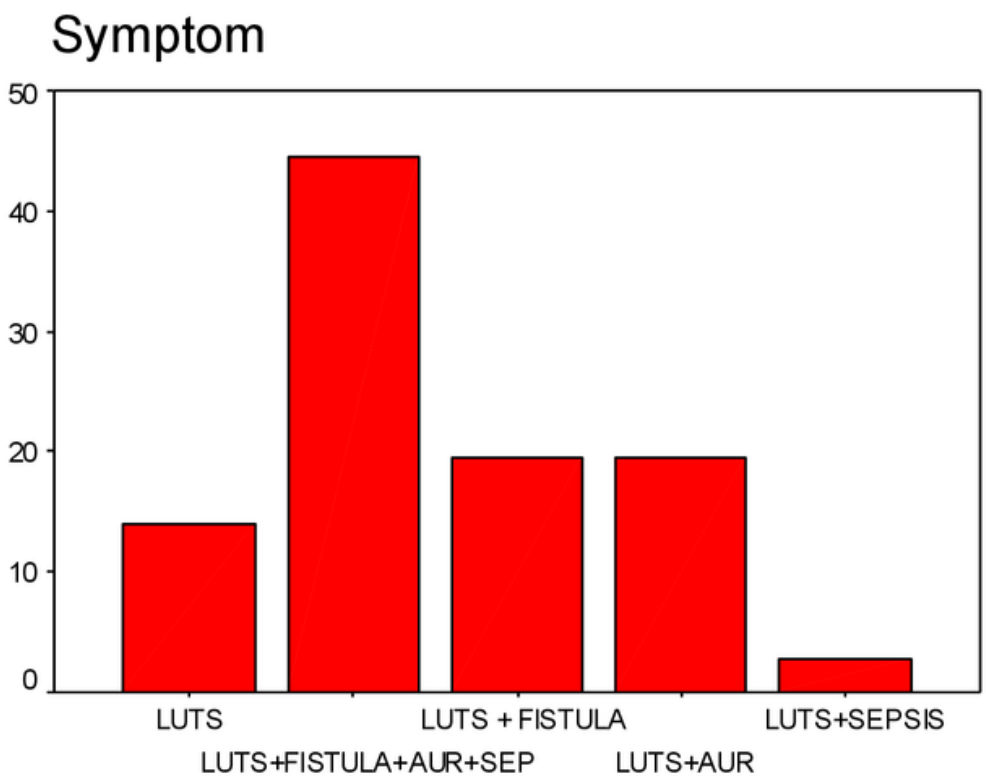
surgeon				
Total	36	100.0	100.0	



SRS done by

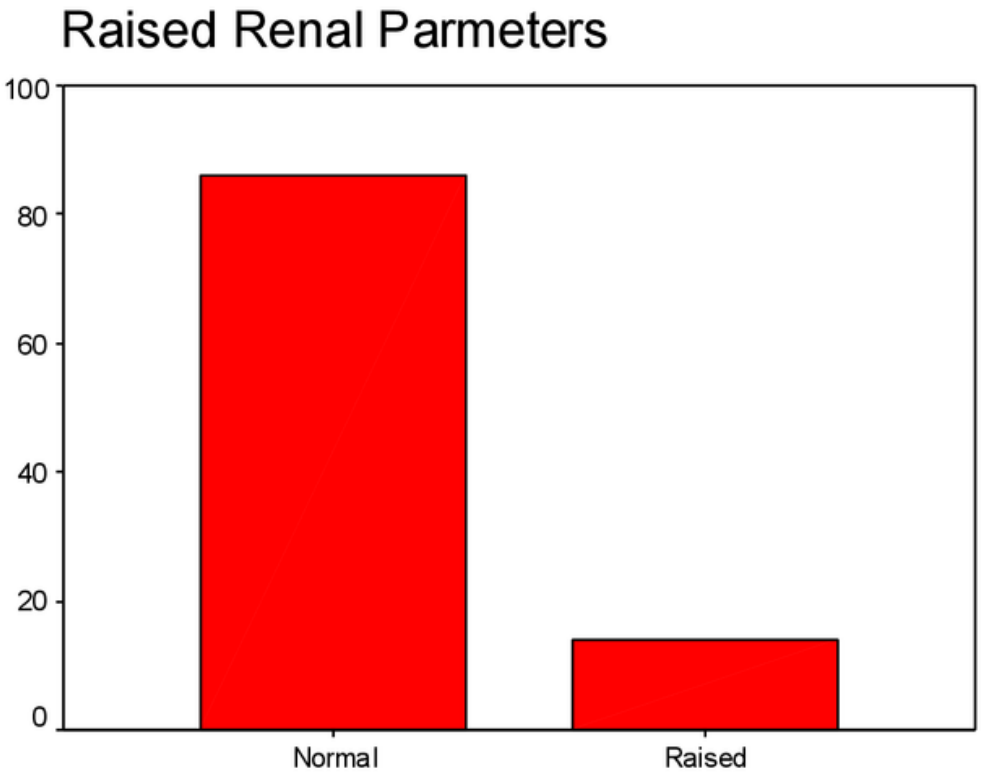
Symptom

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	LUTS	5	13.9	13.9	13.9
	LUTS+FISTULA+AUR+SEPSIS	16	44.4	44.4	58.3
	LUTS + FISTULA	7	19.4	19.4	77.8
	LUTS+AUR	7	19.4	19.4	97.2
	LUTS+SEPSIS	1	2.8	2.8	100.0
	Total	36	100.0	100.0	



Raised Renal Parmeters

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	31	86.1	86.1	86.1
	Raised	5	13.9	13.9	100.0
	Total	36	100.0	100.0	

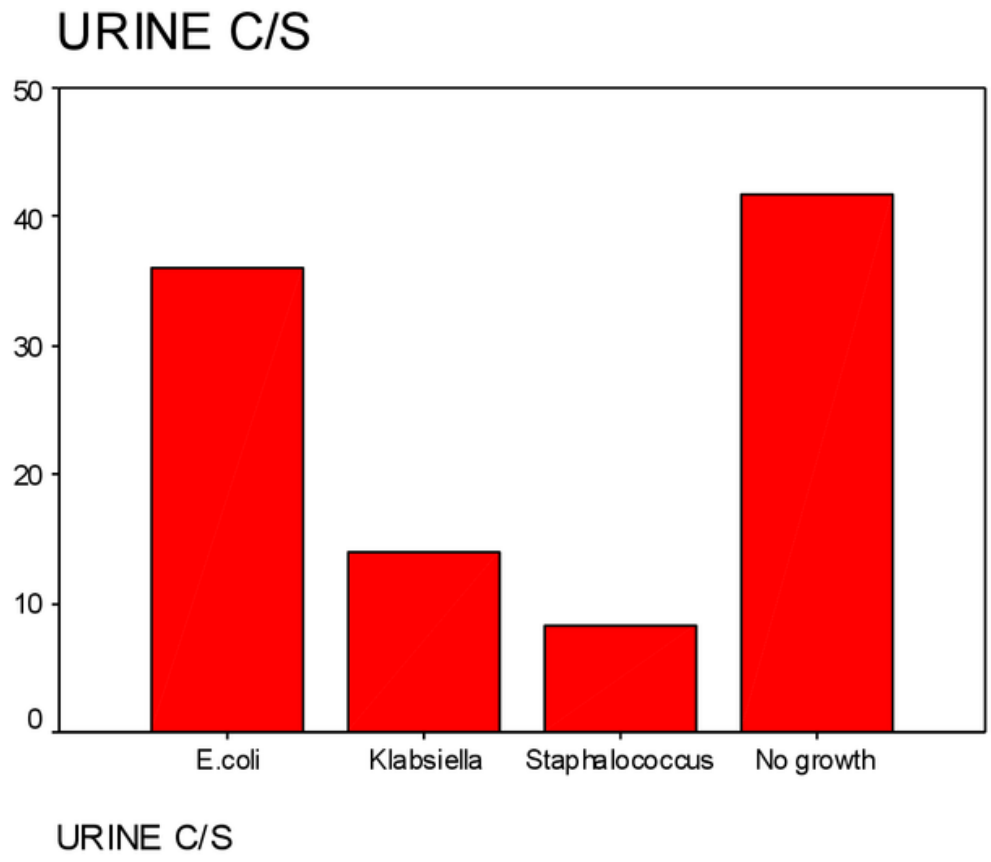


Raised Renal Parmeters

URINE C/S

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	E.coli	13	36.1	36.1	36.1
	Klabsiella	5	13.9	13.9	50.0
	Staphalococcus	3	8.3	8.3	58.3
	No growth	15	41.7	41.7	100.0

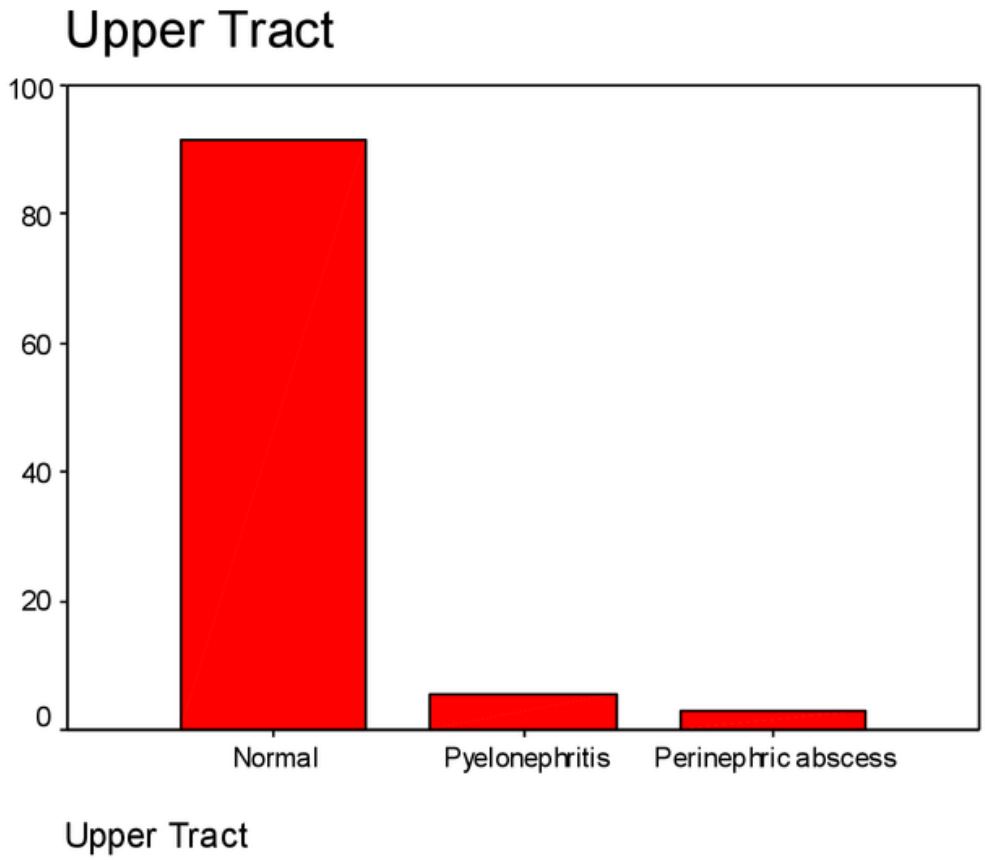
Total	36	100.0	100.0	



Upper Tract

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	33	91.7	91.7	91.7
	Pyelonephritis	2	5.6	5.6	97.2
	Perinephric abscess	1	2.8	2.8	100.0

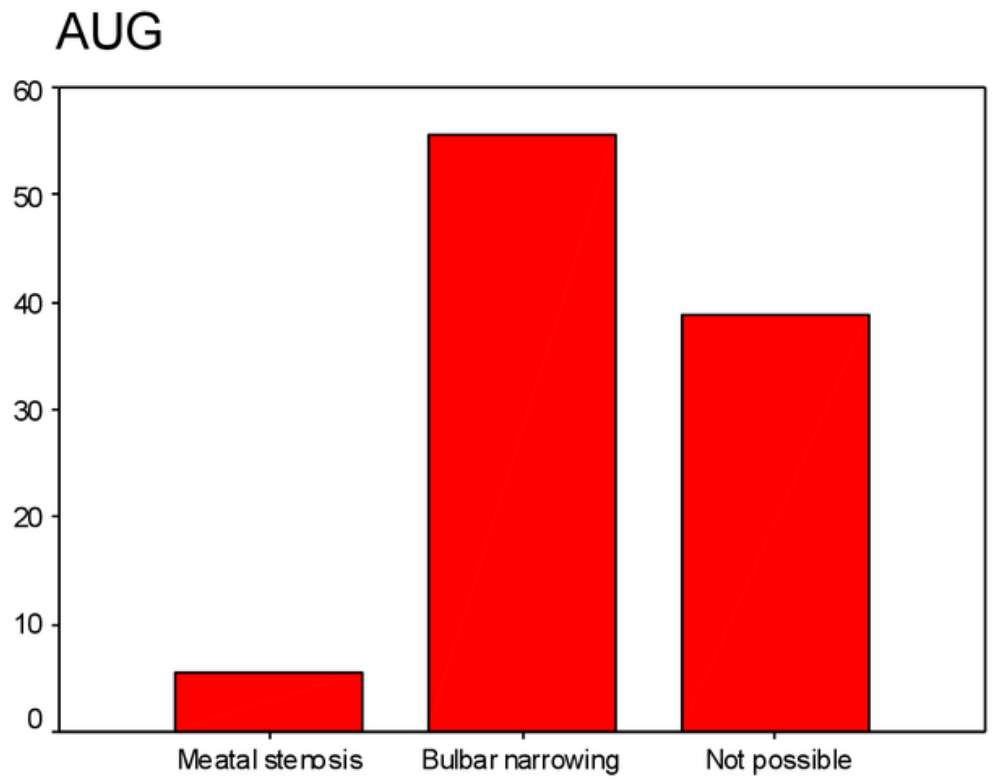
Total	36	100.0	100.0	



AUG

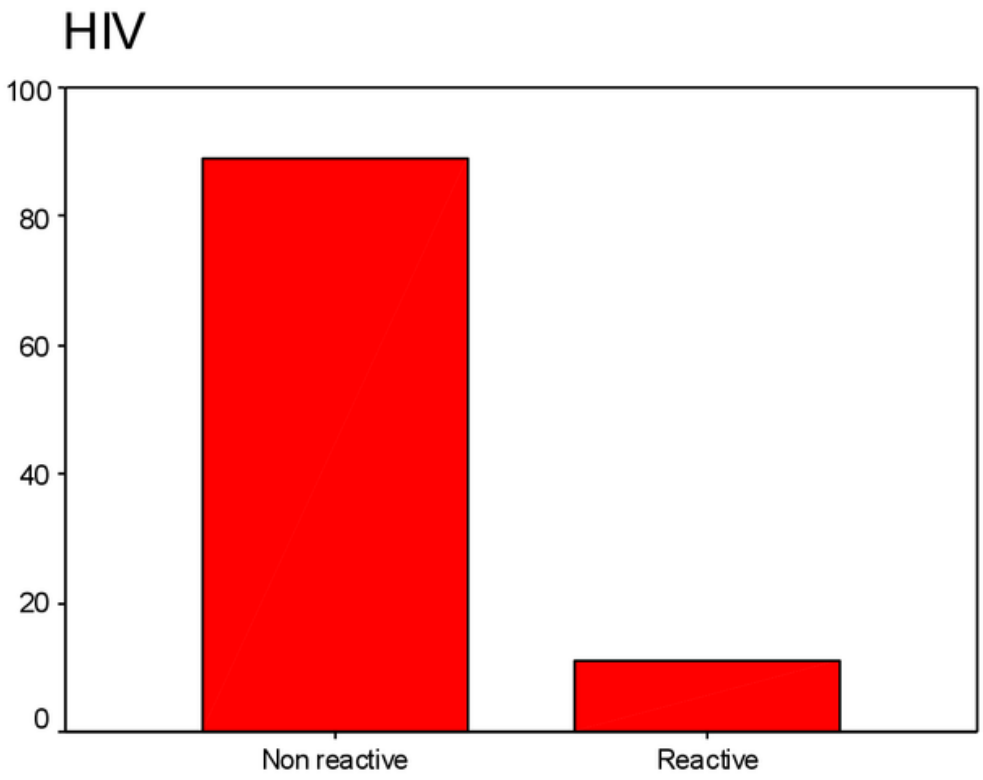
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SubMeatal stenosis	2	5.6	5.6	5.6
	Bulbar narrowing	20	55.6	55.6	61.1
	Not possible	14	38.9	38.9	100.0

Total	36	100.0	100.0	



HIV

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non reactive	32	88.9	88.9	88.9
	Reactive	4	11.1	11.1	100.0
	Total	36	100.0	100.0	

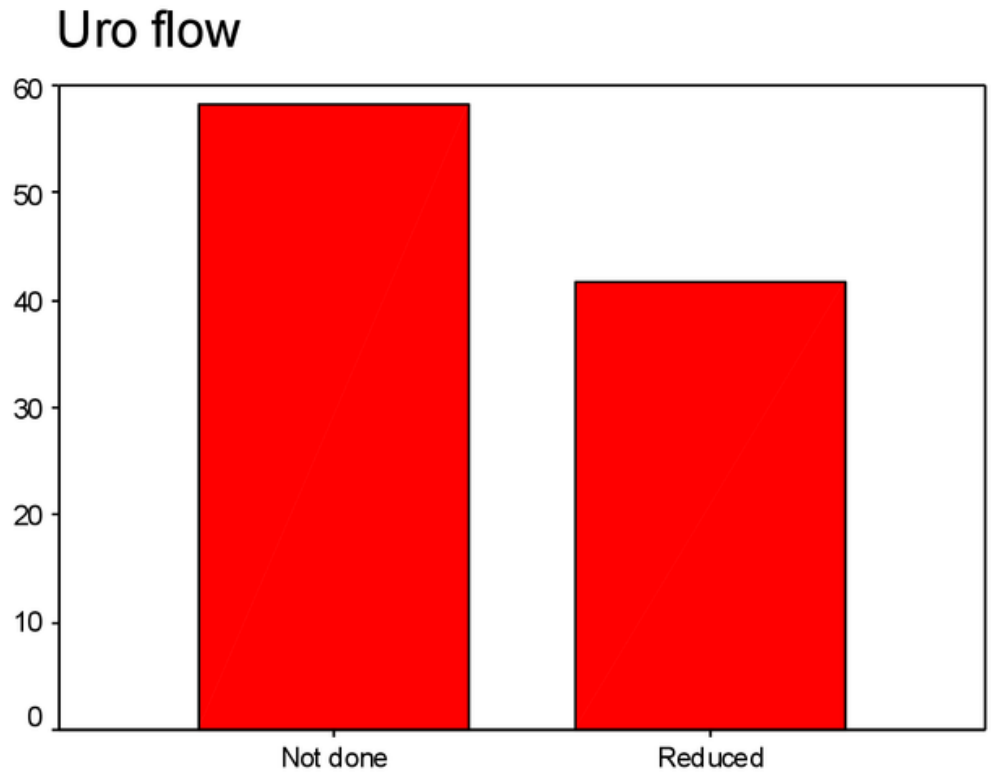


HIV

Uro flow

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not done	21	58.3	58.3	58.3
	Reduced	15	41.7	41.7	100.0

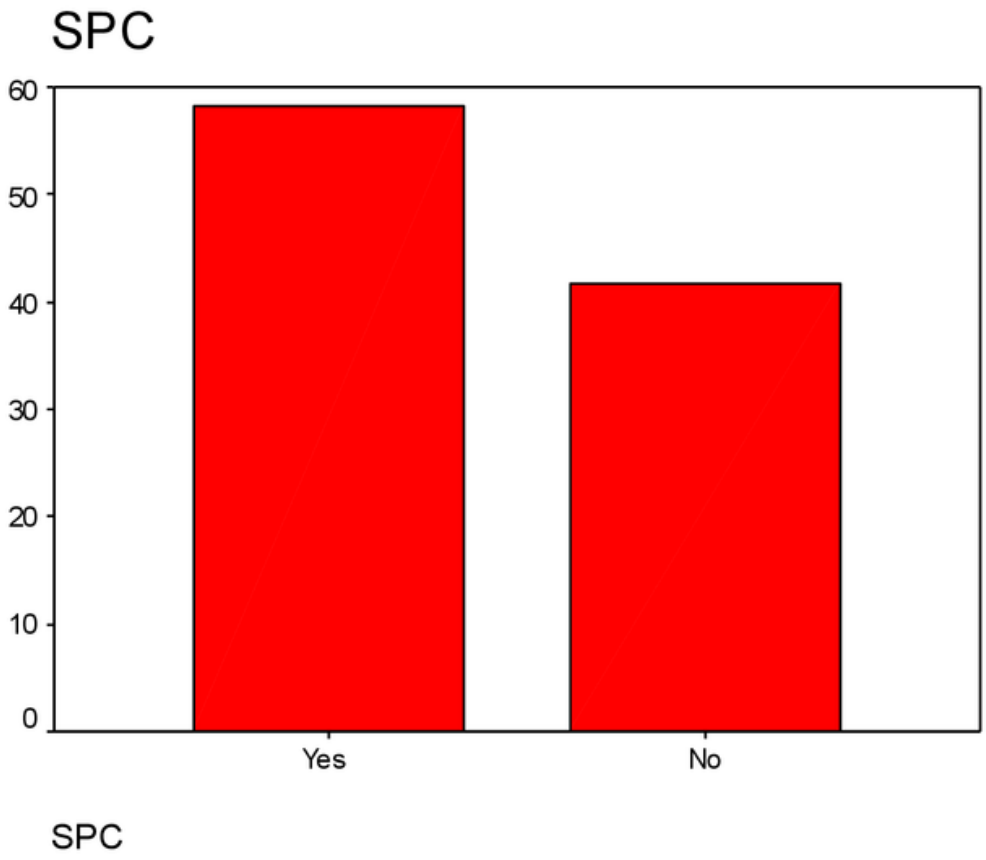
Total	36	100.0	100.0	



Uro flow

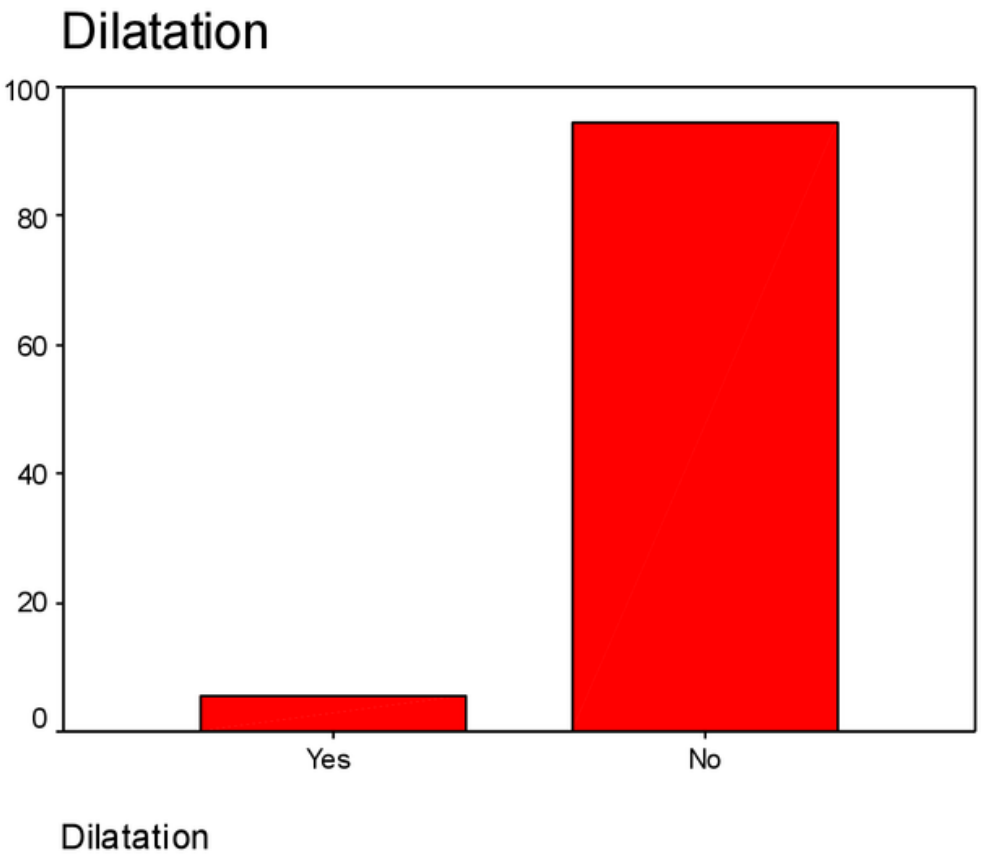
SPC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	21	58.3	58.3	58.3
	No	15	41.7	41.7	100.0
	Total	36	100.0	100.0	



Dilatation

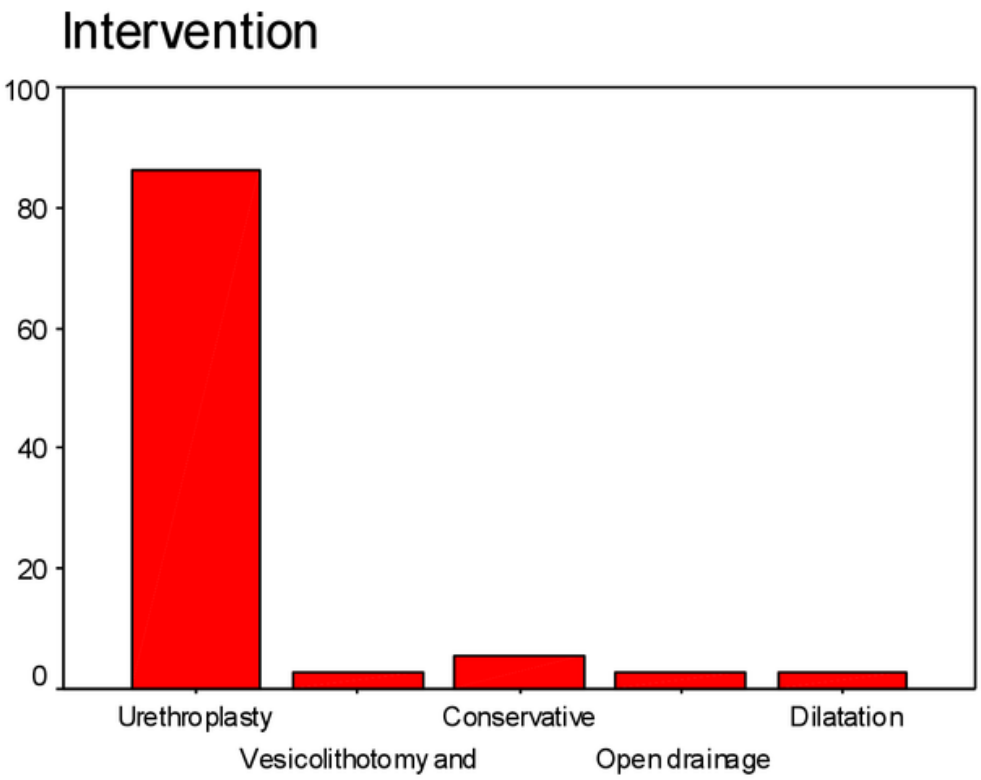
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	5.6	5.6	5.6
	No	34	94.4	94.4	100.0
	Total	36	100.0	100.0	



Intervention

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urethroplasty	31	86.1	86.1	86.1
	Vesicolithotomy and urethroplasty	1	2.8	2.8	88.9

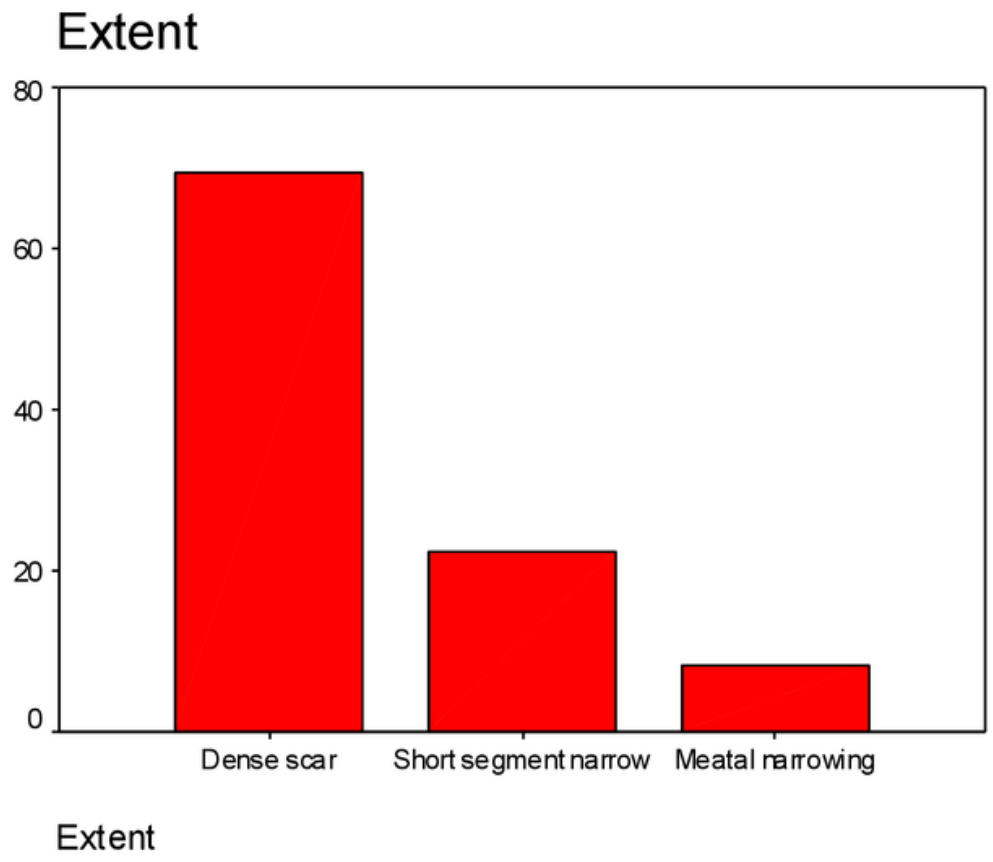
	Conservative	2	5.6	5.6	94.4
	Open drainage	1	2.8	2.8	97.2
	Dilatation	1	2.8	2.8	100.0
	Total	36	100.0	100.0	



Extent

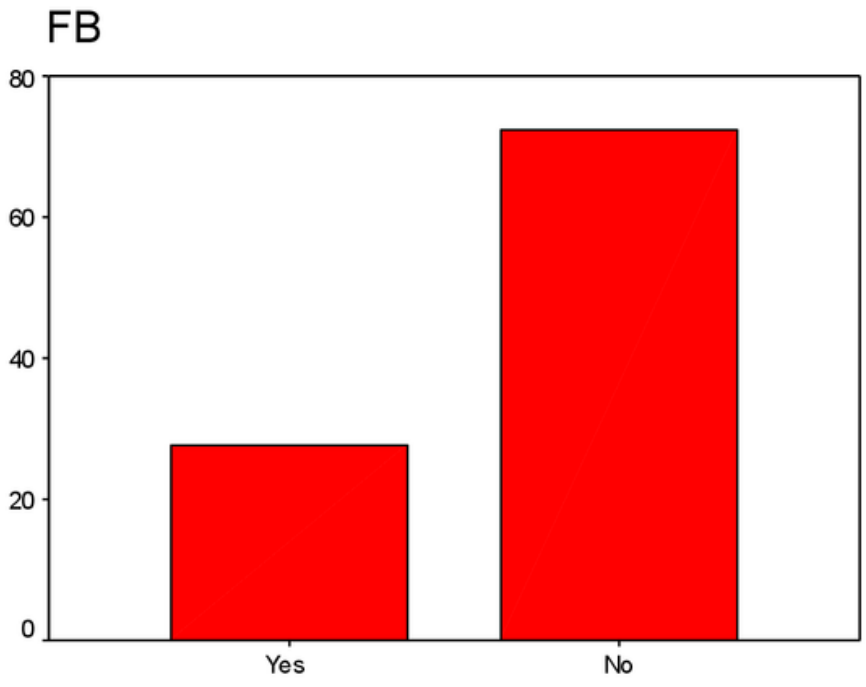
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dense scar	25	69.4	69.4	69.4
	Short segment narrowing	8	22.2	22.2	91.7
	Meatal narrowing	3	8.3	8.3	100.0

Total	36	100.0	100.0	



FOREIGN BODIES (FB)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	27.8	27.8	27.8
	No	26	72.2	72.2	100.0
	Total	36	100.0	100.0	



FB

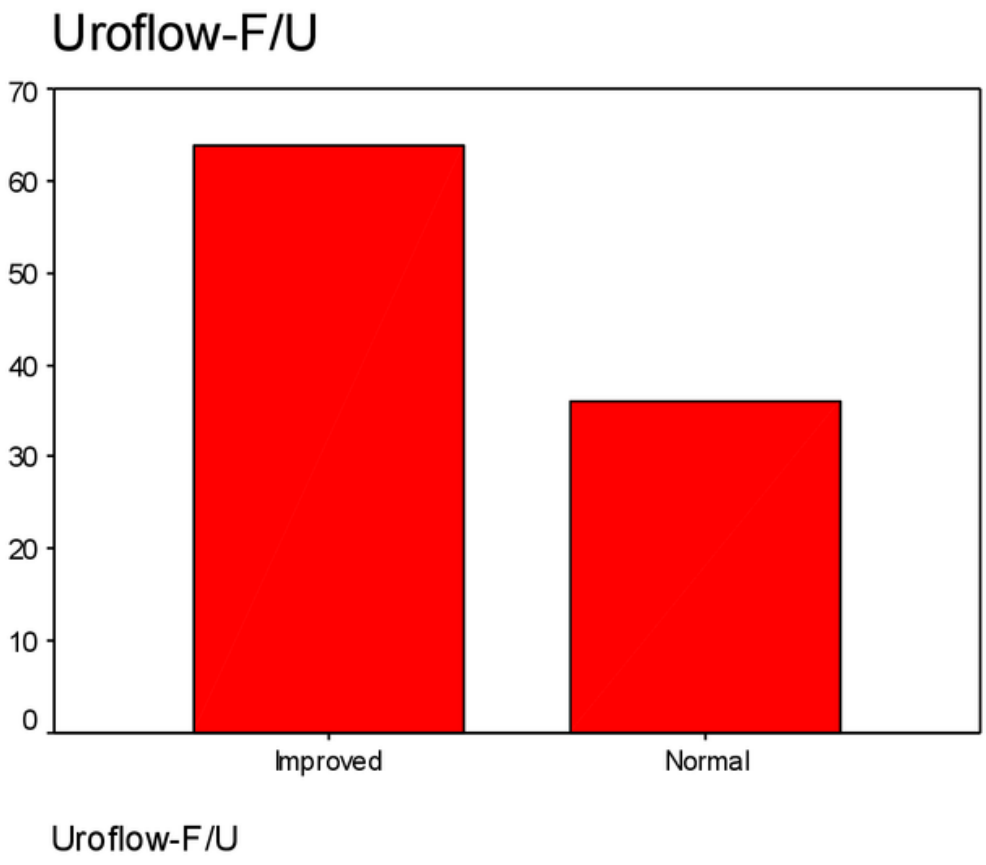
Cystoscopy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	trabeculations	34	94.4	94.4	94.4
	Stones with trabeculation	1	2.8	2.8	97.2

	&cystitis				
	Cystitis&trabeculations	1	2.8	2.8	100.0
	Total	36	100.0	100.0	

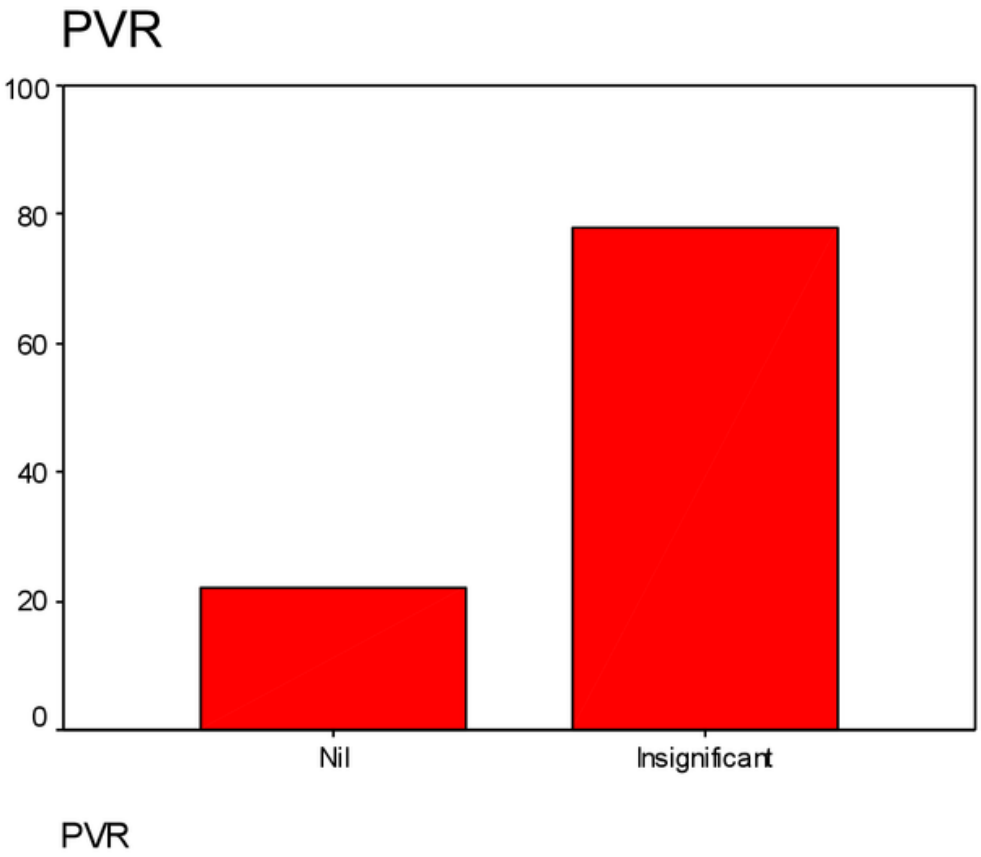
Uroflow-F/U

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Improved	23	63.9	63.9	63.9
	Normal	13	36.1	36.1	100.0
	Total	36	100.0	100.0	



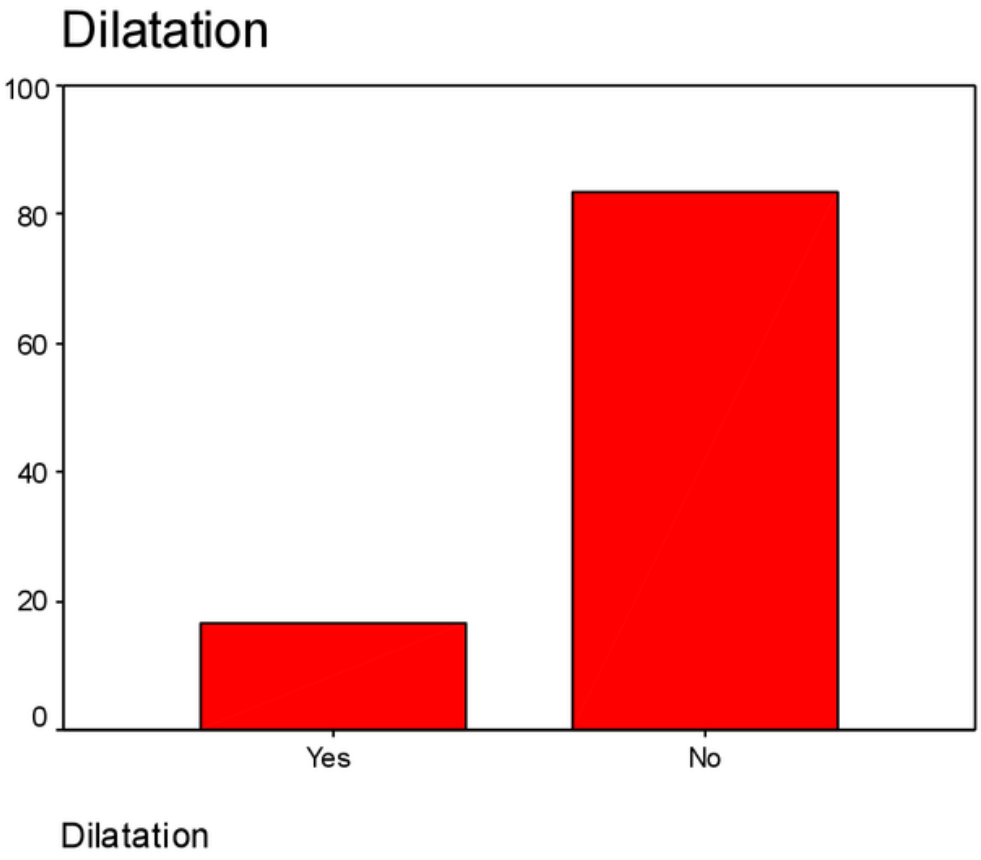
PVR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nil	8	22.2	22.2	22.2
	Insignificant	28	77.8	77.8	100.0
	Total	36	100.0	100.0	



Dilatation

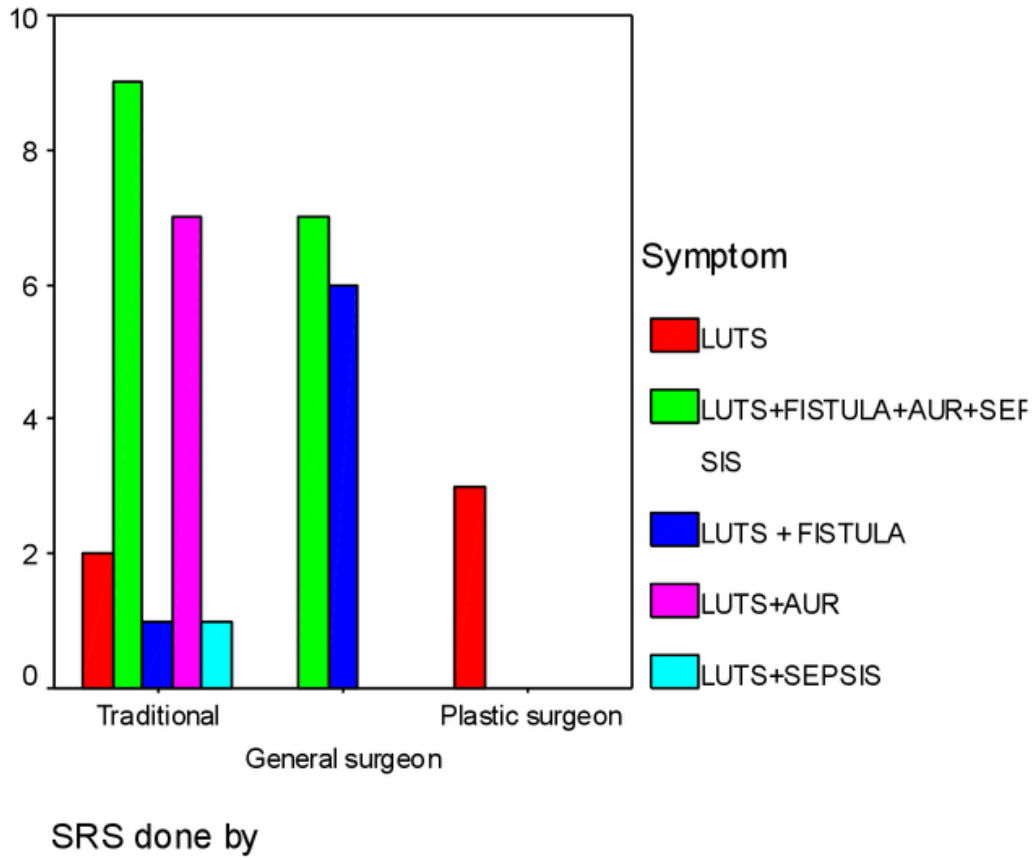
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	6	16.7	16.7	16.7
	No	30	83.3	83.3	100.0
	Total	36	100.0	100.0	



SRS done by vs Symptoms

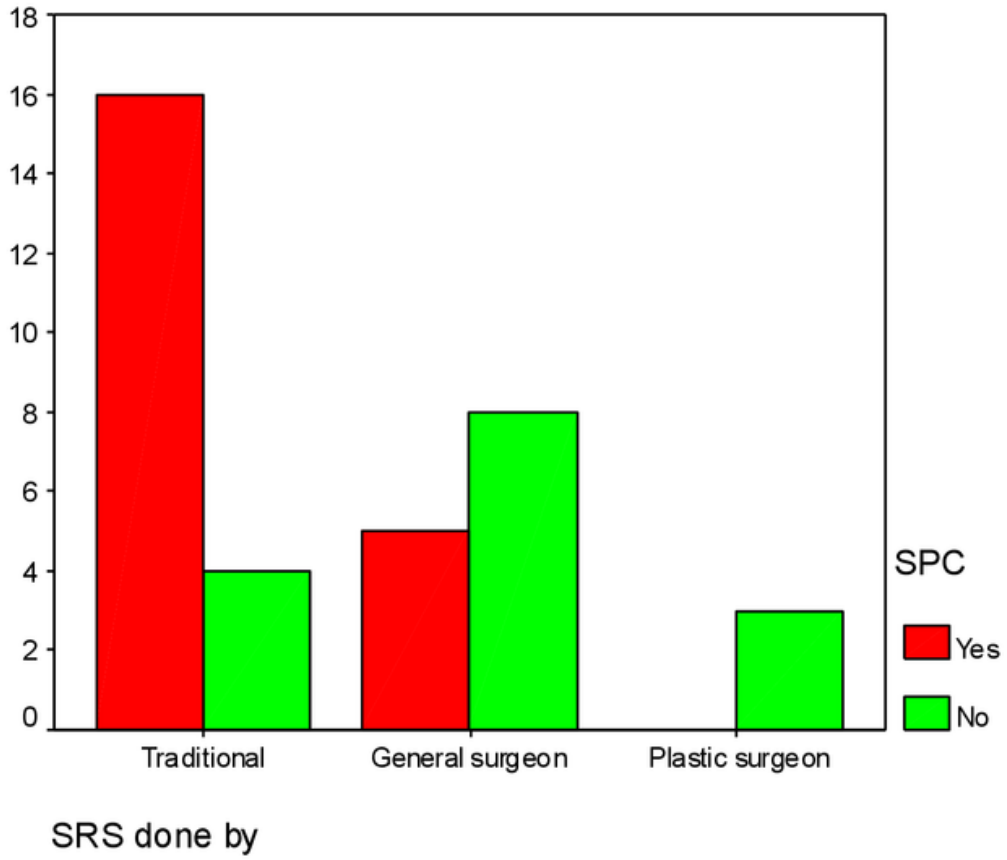
	Symptom					Total
	LUTS	LUTS+FISTULA+AUR+SEPSIS	LUTS + FISTULA	LUTS+AUR	LUTS+SEPSIS	

SRS done by	Traditional	Count	2	9	1	7	1	20
		% within SRS done by	10.0%	45.0%	5.0%	35.0%	5.0%	100.0%
		% within Symptom	40.0%	56.3%	14.3%	100.0%	100.0%	55.6%
	General surgeon	Count	0	7	6	0	0	13
		% within SRS done by	.0%	53.8%	46.2%	.0%	.0%	100.0%
		% within Symptom	.0%	43.8%	85.7%	.0%	.0%	36.1%
	Plastic surgeon	Count	3	0	0	0	0	3
		% within SRS done by	100.0%	.0%	.0%	.0%	.0%	100.0%
		% within Symptom	60.0%	.0%	.0%	.0%	.0%	8.3%
Total		Count	5	16	7	7	1	36
		% within SRS done by	13.9%	44.4%	19.4%	19.4%	2.8%	100.0%
		% within Symptom	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



SRS done by vs SPC

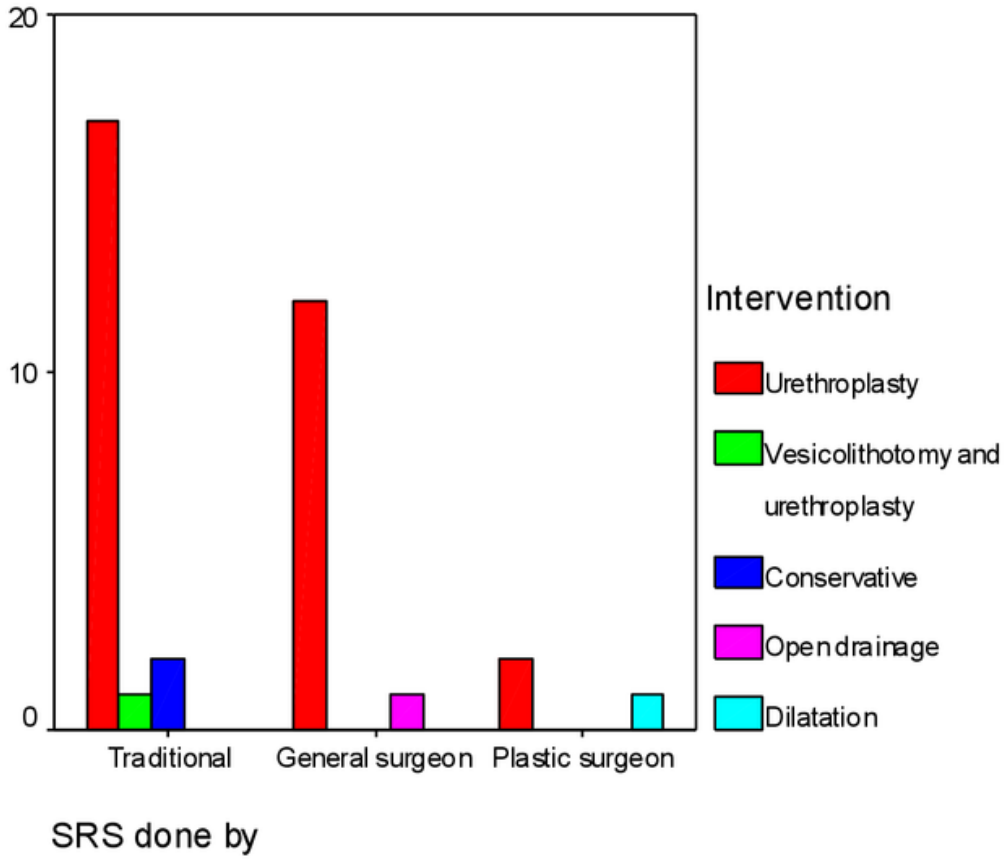
			SPC		Total	p- value (chi square test)
			Yes	No		
SRS done by	Traditional	Count	16	4	20	0.006
		% within SRS done by	80.0%	20.0%	100.0%	
		% within SPC	76.2%	26.7%	55.6%	
	General surgeon	Count	5	8	13	
		% within SRS done by	38.5%	61.5%	100.0%	
		% within SPC	23.8%	53.3%	36.1%	
	Plastic surgeon	Count	0	3	3	
		% within SRS done by	.0%	100.0%	100.0%	
		% within SPC	.0%	20.0%	8.3%	
Total		Count	21	15	36	
		% within SRS done by	58.3%	41.7%	100.0%	
		% within SPC	100.0%	100.0%	100.0%	


18
16
14
12
10
8
6
4
2
0
Traditional
General surgeon
Plastic surgeon
SPC
Yes
No
SRS done by

SRS done by * Intervention

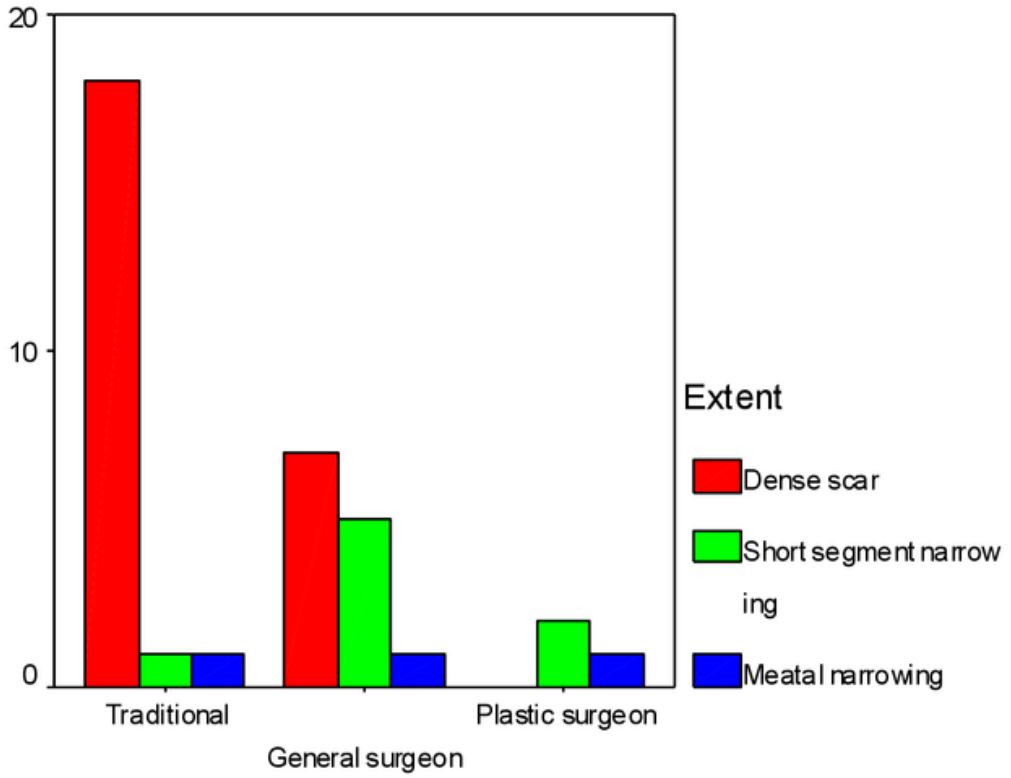
Crosstab

			Intervention				
			Urethroplasty	Vesicolithotomy and urethroplasty	Conservative	Open drainage	Dilatation
SRS done by	Traditional	Count	17	1	2	0	0
		% within SRS done by	85.0%	5.0%	10.0%	.0%	.0%
		% within Intervention	54.8%	100.0%	100.0%	.0%	.0%
	General surgeon	Count	12	0	0	1	0
		% within SRS done by	92.3%	.0%	.0%	7.7%	.0%
		% within Intervention	38.7%	.0%	.0%	100.0%	.0%
	Plastic surgeon	Count	2	0	0	0	1
		% within SRS done by	66.7%	.0%	.0%	.0%	33.3%
		% within Intervention	6.5%	.0%	.0%	.0%	100.0%
Total		Count	31	1	2	1	1
		% within SRS done by	86.1%	2.8%	5.6%	2.8%	2.8%
		% within Intervention	100.0%	100.0%	100.0%	100.0%	100.0%


20
10
0
Traditional
General surgeon
Plastic surgeon
SRS done by
Intervention
Urethroplasty
Vesicolithotomy and urethroplasty
Conservative
Open drainage
Dilatation

SRS done by vs Extent of Urethral scarring

			Extent			Total	P value (chi square test)
			Dense scar	Short segment narrowing	Meatal narrowing		
SRS done by	Traditional	Count	18	1	1	20	0.011
		% within SRS done by	90.0%	5.0%	5.0%	100.0%	
		% within Extent	72.0%	12.5%	33.3%	55.6%	
	General surgeon	Count	7	5	1	13	
		% within SRS done by	53.8%	38.5%	7.7%	100.0%	
		% within Extent	28.0%	62.5%	33.3%	36.1%	
	Plastic surgeon	Count	0	2	1	3	
		% within SRS done by	.0%	66.7%	33.3%	100.0%	
		% within Extent	.0%	25.0%	33.3%	8.3%	
Total		Count	25	8	3	36	
		% within SRS done by	69.4%	22.2%	8.3%	100.0%	
		% within Extent	100.0%	100.0%	100.0%	100.0%	


20
10
0
Traditional
General surgeon
Plastic surgeon
Extent
Dense scar
Short segment narrowing
Meatal narrowing

SRS done by

Discussion:

In my study all 36 patients were transwomen. All except one were school dropouts coming from a low social strata. Most of them were isolated from their original families once they started developing symptoms of gender dysphoria and started living with their peer groups.most of them earned their livelihood through begging or performing folk dances

Two of the 36 people were engaged as commercial sex workers. Two of them were married to seemingly normal men

All of them were garishly dressed as females with female mannerisms all were mostly polite but demanded immediate attention

Age group

Youngest member was 19yrs & oldest was 50yrs.

The mean age was 27yrs.

Primary surgery:

Was done by either of the 3 groups of persons

1) Traditional group comprised of quack s and senior members of transsexuals

2) Surgery done by general surgeon

3)Surgery done plastic surgeon

In my study 20 individuals have undergone SRS by traditional methods accounting for 55.5%. 13 persons had undergone surgery by general surgeon accounting for 36%. Only 3 of them had undergone surgery by plastic surgeon accounting for 8.3%.

Symptomatology :

30%of the patients presented to the OP within 3 mths of the primary surgery and the rest within the next 1 yr

Majority of the patients about16 cases(44%) presented with LUTS, AUR and fistula.seen in 5 cases(19.45%)presented with LUTS and fistula.

Another 5%(19.5%) presented with AUR &LUTS

5 CASES presented with LUTS Alone

Caseswith AUR had a prior UTI as a precipitating cause.

Patients with meatal stenosis and short segment narrowing used cloves toothpicks ear buds to keep the meatus open .Two patients presented with loin pain and tenderness and fever

Out of 36 people 1presented with fever with chills. suggestive o f frank septicemia .There was a palpable mass in the right hypochondrium and lumbar regionsin and the right loin .

Laboratory investigation:

33 out of 36 people had normal renal perameters(86%). Among the 3 with raised perameters 2 had pyelonephritis and 1 had perinephric abscess.

Urine culture sensitivity:

E.coli was present in 13 cases(36%)of cases sensitive to amikacin and ciprofloxacin

Klebsiella was present in 5 cases (13.9%)of cases.and sensitive to amikacin

S.aureaus was present in 3(8.3%) cases was associated with perinephric abscess and septicemia.the organism was sensitive only to Meropenam

In 15cases(41.1%)the urine was sterile.all gave history of using on and off antibiotics

HIV status :

4 out of 36 were sero positive for HIV ;two were commercial sex workers resorting to URAS .The other 2 were living with their partners

3 of the seropositiveCases presented with signs of sepsis and 1 with AUR.All four of them were aware of their HIV status . The CD4 count stood at above1000 for all four patients . They were on lamividine ziduvidine and nevirapine.

Upper tract:

33 out of 36 cases (i.e 91.7%) were normal.

2 cases had pyelonephritis and 1 had perinephric abscess.

AUG:

In 14cases () 38.9% was associated with severe obliteration of meatus hence AUG could not be done.

Severe narrowing of the urethra was seen in 20 case(55.6%)

Isolated meatal stenosis was seen in 2 (5.6%)of the cases

Uroflowmetery:

Qmax was well below 12ml/sec in 14(41.7%).cases. In another 22 cases(58.3%) uroflow could not be done as they presented with due to severe stricture acute retention and had to do a trocar SPC

CT KUB

-done for 2 patients who presented with pyelonephritisand 1 case with perinephric abscess

CYSTOSCOPY was done during definitive repair .33 underwent scopy prostatic fossa atrophied in all of them I case showed features of cystitis and anothershowed multiple stones with cystitis .bladder biopsy showed only inflammatory changes.

NATURE OF INTERVENTION:depending on the degree of obstruction and urethral narrowing

1)ONLY DILATATION

2)MEATOPLASTY

3) REVISION URETHROPLASTY

4) VESICOLITHOTOMY WITH URETHROPLASTY

5)OPEN DRAINAGE OF PERINEPHRIC ABSCESS

6)CONSERVATIVE;

1)Dilatation:

1patient had mild meatal narrowing had undergone SRS by plastic surgeons .dilatation with metal sounds was done . voided well USG revealed a PVR less than 15ml .post dilatation uroflow revealed Qmax of 22ml /sec compared to 12ml/sec before procedure

2)MEATOPLASTY

was done in 2 patients both had had under gone SRS by plasticsurgeons .scarring extended just beyond the meatus. BLANDYS FLAP created with perfect mucosal stitches to prevent retractionof the edges . catheterized for 1weekwith 18fr foleys catheterafter removal of catheterppatients voided well with Q MAX of 20ml/sec PVR Was insignificant

3)REVISION URETHROPLASTY

dense scarring involving almost bulbar urethra was seen in 31 cases .out of this 20 cases were done by traditional people .the urethra was mobilized by excising the entire scar tissue through ainverted u shaped incision in the perineum after confirming the vascularity perinealurethrostomy was completed.18fr Foleys catheter was inserted and removed all the patients voided with their SPC

clamped .Qmax reached 16-18ml/sec .and pPVR was insignificant.finally patients and were taught self dilatationdischargedstones

4)VESICOLITHOTOMY WITH URETHROPLASTY

1 patient had formed multiple bladder stones due to chronic obstruction SRS was again done by a senior member of their group done vesicolithotomywith perineal urethrostomy done.

5)OPEN DRAINAGE OF PERINEPHRIC ABSCESS

1patient who tested positive for HIV presented with a right perinephric abscess tracking down the psoas musclebladder distensionsevere urethral stenosis and septicemia and raised renal parametersCT SCAN Confirmed the diagnosis .resuscitation SPC and open drainage through a flank incision doneurine and blood culture revealed S taph.aureas growth patient requested to be discharged on the 14th day and was lost for followup

6)CONSERVATIVE MANAGEMENT OF PYELONEPHRITIS

2 patients with acute PN showed urine growth with E.coli ann treated with amikacin for 1week they responded well &were discharged at request and lost for follow up

1 OBSERVATIONS IN 3 DIFFERENT GROUPS

group had 20persons the maximal numbers with maximal complications

Theithe incidence ofLUTS AUR MULTIPLE FISTULAEsAND UTI was 56% incidencefrank sepsis was 5%copare d to52%and 0%in the general surgeon group nil incidence of sepsis or AUR In the plastic surgeon group

P VALUE WAS0.001 STASTICALLY SIGNIFICANT

INCIDENCE OF SPC AMONGTHE GROUPS

IN THE TRADITIONAL GROUPS SPC WAS DONE IN 80% of cases whereas it was 38.5%in the general surgery group and nil in the plastic surgery group

P value was 0.006statistically significant

FINDING OF DENSE SCARRING AMONG THE GROUPS

The incidence was90%in the traditional group 53.8% in the general surgeon group& nil in the plastic surgery group

P VALUE 0.011 STATISTICALLY SIGNIFICANT

SURGICAL INTERVENTION AMONG THE THREE GROUPS

Traditional groups accounted for 54.8%of interventions general surgeons group accounted for 38.7%andthe plastic surgeon group accounted for 6.5% of surgeries

P VALUE O.01 STATISTICALLY SIGNIFICANT

FoLLOW UPI

n patients with dense scarring catheter was removed on 10th day and the rest had their catheter taken off on the 7 thpost operative day

All the patients were followed up for 2weeks during which USG PVR Estimation at3mthsUroflowmetry for Qmax was done . Ofthe36 patients only 6 were available for follow up .At3monthsall 6 patients with regular dilatation were symptom free with a normal voiding pattern.

LIMITATIONS

My study comprised of only 36 patients .IT had patientswho had undergone only emasculinisation and not the complete genital reconstruction it was not adequately powered. it lacked longterm follow up further studies are needed to arrive at definitive conclusions

Conclusion

GID is a complex disorder. and a clinical entity demanding a multidisciplinary approach. . The goal is to produce an outward appearance consistent with the patient's gender identity t Hormonal and surgical treatments should be managed by a multiprofessional team familiar with the procedures. In my study urologist was not involved in any of the surgeries . Most of the complications are preventable .The severe complications were seen in those surgeries doneby traditional persons.lack of proper followup aggravates the situation.it must be mandatoryfor the urologist to be included in primary surgery. A proper mucosal to mucosal apposition is needed to prevent urethral stenosis.patients must be motivated to come for regular follow up

.

ABBREVIATIONS:

GID-Gender identity disorder

GAS-Gender affirmation surgery

SRS-sex reassignment surgery

FTM-female to male

MTF-male to female

PVR-postvoid residue

USG-ultrasonogram

CT-computed tomogram

AUG-Acending urethrogram

SPC-Suprapubic catheter

PN-pyelonephritis